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From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>  
Errors-To: Ham-Digital-Errors@UCSD.Edu  
Reply-To: Ham-Digital@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Digital Digest V94 #59  
To: Ham-Digital

Ham-Digital Digest                      Sat, 5 Mar 94                      Volume 94 : Issue    59

Today's Topics:

AX.25 and Linux - my experience  
Email address for ARRL? (3 msgs)  
EMAIL to mid-ocean?  
Linux AX.25 driver  
TPK Paket Software. (2 msgs)

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>  
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: 3 Mar 94 16:53:58 GMT  
From: ihnp4.ucsd.edu!mvpb.saic.com!MathWorks.Com!europa.eng.gtefsd.com!  
howland.reston.ans.net!pipex!uknet!nessie!mucs!chardi@network.ucsd.edu  
Subject: AX.25 and Linux - my experience  
To: ham-digital@ucsd.edu

Hi,

A few days ago I posted a question about AX.25 and Linux - various people asked  
me to post my findings, so here goes. Please don't have a go at me re: my lack  
of knowledge of the Linux kernel; although I've been Linuxing for quite a  
while, my knowledge of the kernel is fairly limited.

This is how I got KISS encapsulated AX.25 TCP/IP working on Linux 0.99-pl15.  
Note that some of this is conjecture; i.e. it seems to work :-)

1. ftp the AX.25 patches from sunacm.swan.ac.uk:/pub/misc/Linux/Radio/AX25012  
(there may be a later revision than 12).

2. Unpack the new files in the Linux source tree - there are a few in net/inet, and one in include/linux.
3. Do a 'mknod /dev/af\_ax25 c 30 0' (I don't know if this is actually necessary).
4. Edit drivers/net/slip.c. Search for ax25\_test, and change the callsign therein to your own. For example, for my call (G7OMZ-5):

```
static char ax25_test[7]={ 'G'<<1, '7'<<1, '0'<<1, 'M'<<1, 'Z'<<1, ' ' <<1, '5'<<1};
```

5. The next bit is quite hacky. There is an implementation of KISS encapsulation in slip.c, but by default it isn't enabled. I couldn't figure out how to make a SIOCSIFENCAP ioctl() call (I didn't know what to give it as a file

descriptor),

so I just hard-wired it to set all SLIP channels to SL\_MODE\_AX25 in sl\_initialize(). Of course, this won't do if you use SLIP for anything else, so you'll have to hack around in slip\_init(). There's a call to

sl\_initialize()

in there, so you'll have to test for certain interfaces and set SL\_MODE\_AX25 accordingly. I don't know enough about the kernel to comment.

6. Edit config.in, and search for CONFIG\_PLIP. Add a line above it:

```
bool 'AX.25 (KISS) encapsulation support' CONFIG_AX25 y
```

7. make mrproper ; make config ; make dep ; make zImage, then install the new kernel

as per usual and reboot. Fingers crossed!

8. When the system comes back up, create a file containing the following commands:

```
port ttyS2
speed 9600
term
local 44.131.1.254
remote 44.131.1.57
mode SLIP
```

Replace ttyS2 with the port your TNC is connected to, and the local IP address should be your own. The remote IP address should be either the nearest neighbour through whom you want to route, or your local subnet (mine is 44.131.1.0).

9. Type 'dip filename'. You'll be in terminal mode with your TNC. Put it into KISS mode (usually 'kiss on') and type a ^]. This should set everything up for you.

10. If you type `/etc/ifconfig`, you should see two messages; one for the loopback device 'lo', and one for 'sl0'. If you type `/etc/route`, you should see that there is now an entry for 'sl0'. You can either make this your default router (as you would do if there is an Internet gateway nearby) with:

```
/etc/route add default gw 44.131.1.57
```

...or (more likely) you will only want to route `ampr.org` packets through it, which will look like:

```
/etc/route add 44.0.0.0 gw 44.131.1.57
```

11. That's it! You can now add those commands to your `/conf/net/rc.inet[12]` files to set it up at boot time.

Cheers,

Ian.

--

```
[ Ian Chard, Systems Integration | To sculpt an elephant, obtain a large      ]
[ Email:      flup@cs.man.ac.uk | block of marble and remove all the bits ]
[ NTS: G7OMZ @ GB7CRG.#16.GBR.EU | that don't resemble an elephant.    ]
[ AMPRnet:  g7omz@g7omz.ampr.org |                               -- Anon  ]
```

-----  
Date: Thu, 3 Mar 1994 21:01:05 GMT  
From: world!dts@decwrl.dec.com  
Subject: Email address for ARRL?  
To: ham-digital@ucsd.edu

In article <2l3ks3\$q9e@hermes.acs.ryerson.ca> jeff@ee.ryerson.ca (Donald Jeff Dionne) writes:

>Brian Mahaffy (brianm@boi.hp.com) wrote:

>: Hi folks. Does anyone know the email address for the ARRL. I know they  
>: are on the net, but have not been able to get an address for them.

>

>: Fingering @arrl.org was no help.

>

>: I hope this isn't an FAQ, but I couldn't locate any FAQ list here or  
>: on UCSD.EDU.

>

>

>: Thanks & 73s .....Brian

>

>

>For us, arrl.org is an unknown host. Therefore, email to  
>info@arrl.org  
>  
>goes nowhere. Is this the correct host name?

The address is correct. Your system is not handling MX records properly, I would guess. Ask your friendly system administrator. Using nslookup, set type to MX, and try arrl.org. You should get a response showing you who handles mail for arrl.org. Your mailer is supposed to automatically do this lookup and push the mail along.

73,

Dan N1JEB

--

```
-----
Daniel Senie                Internet:    dts@world.std.com
Daniel Senie Consulting      n1jeb@world.std.com
508-365-5352                Compuserve:  74176,1347
-----
```

Date: 3 Mar 1994 17:02:40 GMT  
From: ihnp4.ucsd.edu!mvb.saic.com!news.cerf.net!usc!elroy.jpl.nasa.gov!sdd.hp.com!  
col.hp.com!news.dtc.hp.com!hpscit.sc.hp.com!icon!hpbs3591.boi.hp.com!  
brianm@network.ucsd.edu  
Subject: Email address for ARRL?  
To: ham-digital@ucsd.edu

Donald Jeff Dionne (jeff@ee.ryerson.ca) wrote:

: Brian Mahaffy (brianm@boi.hp.com) wrote:  
: : Hi folks. Does anyone know the email address for the ARRL. I know they  
: : are on the net, but have not been able to get an address for them.  
: : Fingering @arrl.org was no help.  
: : I hope this isn't an FAQ, but I couldn't locate any FAQ list here or  
: : on UCSD.EDU.  
: : Thanks & 73s .....Brian

: For us, arrl.org is an unknown host. Therefore, email to  
: info@arrl.org  
: goes nowhere. Is this the correct host name?

The unknown host is the reason fingering was no help. I should have this added important point to my original post 8^(.

Our DNS server can't seem to make any sort of resolution about it either.

After setting the default server to NS.PSI.NET nslookup was able to come up with the following, but no resolution for arrl.org!

\*\*\*\*\*

Default Name Server: NS.PSI.NET

Address: 192.33.4.10

> arrl.org

Name Server: NS.PSI.NET

Address: 192.33.4.10

arrrl.org

origin = ns.psi.net

mail addr = hostmaster.ns.psi.net

serial = 199311301

refresh = 7200 (2 hours)

retry = 900 (15 mins)

expire = 2592000 (30 days)

minimum ttl = 86400 (1 day)

arrrl.org nameserver = ns.psi.net

arrrl.org nameserver = ns2.psi.net

arrrl.org preference = 5, mail exchanger = mgate.arrrl.org

arrrl.org preference = 10, mail exchanger = uu7.psi.com

ns.psi.net internet address = 192.33.4.10

ns2.psi.net internet address = 192.35.82.2

mgate.arrrl.org internet address = 38.1.219.1

uu7.psi.com internet address = 38.145.204.6

\*\*\*\*\*

I don't know what the problem is. Maybe a DNS guru can point something out?  
I haven't yet tried to mail something so I don't know if this resolution trouble is going to cause me grief now that I have the addresses for the arrrl.org folks.

: Jeff@EE.Ryerson.Ca

73s ... Brian

--

Brian Mahaffy	Hewlett-Packard	Any sufficiently advanced
Storage Subsystems Division (SSD)		technology, is indistinguishable
N6UGP	(208)396-7857	from Magic!
brianm@zeus.boi.hp.com		Arthur C. Clark
N6UGP@WB7DOW.ID.UA.NA		
Ask me about Linux!		The Free Unix for x86 PCs

"They, that can give up essential liberty, to obtain a little temporary safety, deserve neither liberty nor safety." -- Benjamin Franklin 1759

Date: Thu, 3 Mar 1994 17:28:15 GMT  
From: ihnp4.ucsd.edu!sdd.hp.com!sgiblab!wetware!spunky.RedBrick.COM!psinntp!  
psinntp!arrl.org!jlbloom@network.ucsd.edu  
Subject: Email address for ARRL?  
To: ham-digital@ucsd.edu

Donald Jeff Dionne (jeff@ee.ryerson.ca) wrote:  
: For us, arrl.org is an unknown host. Therefore, email to  
: info@arrl.org

That's because `arr1.org` is not a host, it's a mail address. If you use `nslookup` like so:

```
nslookup -query=MX arr1.org
```

You'll find out all you need to know, including the fact that ARRL mail is handled by hosts `mgate.arrl.org` and `uu7.psi.com`, in that order of preference.

If your system is for some strange reason unable to deal with standard mail addressing via DNS (i.e., MX records), you can use @mgate.arrl.org instead. Presumably your system can resolve that!

— —

Jon Bloom KE3Z      jbbloom@arrl.org

Date: 3 Mar 1994 17:14:43 GMT  
From: ihnp4.ucsd.edu!pacbell.com!sgiblab!sdd.hp.com!hpscit.sc.hp.com!icon!  
hpbs3591.boi.hp.com!brianm@network.ucsd.edu  
Subject: EMAIL to mid-ocean?  
To: ham-digital@ucsd.edu

Mike Waters (rcrw90@email.mot.com) wrote:  
: In article <9403020907.AA11103@sappey.grenoble.hp.com>,  
: ^^^^^^^^^^^^^^^^^^^  
: |||||

```
: walker@sappey.Grenoble.hp.COM (Walker Tim) wrote:  
: > |Subject: EMAIL to mid-ocean?
```

```
: > I'm sure you'll get the same answers from all angles, but here goes anyway
```

: >  
: > First of all remember the licence conditions: AN amateur licence is issued  
: > permit EXPERIMENTS IN RADIO ELECTRICITY, not to permit the establishment of  
: > a communications network!!!!!! (This is true in all countries! :< So...  
: > 1. What sort of info do you want to pass???? Amateur bands are NOT allowed  
: > pass personal info (estimated arrival time, boat needs etc...).

: I'm not sure just what set of rules "Walker Tim" is reading, but they are  
: not part 97 of the FCC rules!

You missed where Tim was posting from, Grenoble FRANCE. He wasn't reading from part 97 at all. He was reading from Part XYZZY of the French equivalent of the FCC's rule book.

That's the problem with the Internet. You can have a nice quiet little conversation and not realize that you're actually shouting around the world if you're not careful about noticing where all the participants are standing.

;^)...The above wasn't a flame, just an observation. Since I work for HP, Grenoble sticks out more to me.

73s....Brian  
--

Brian Mahaffy	Hewlett-Packard	Any sufficiently advanced technology, is indistinguishable from Magic!
Storage Subsystems Division (SSD)		
N6UGP	(208)396-7857	
brianm@zeus.boi.hp.com		
N6UGP@WB7DOW.ID.U.S.A.NA		Arthur C. Clark
Ask me about Linux!		The Free Unix for x86 PCs

"They, that can give up essential liberty, to obtain a little temporary safety, deserve neither liberty nor safety." -- Benjamin Franklin 1759

-----  
Date: 3 Mar 1994 10:36:44 GMT  
From: ihnp4.ucsd.edu!swrinde!gatech!bloom-beacon.mit.edu!senator-bedfellow.mit.edu!tree.mit.edu!cthomas@network.ucsd.edu  
Subject: Linux AX.25 driver  
To: ham-digital@ucsd.edu

I installed the ax25 patch and compiled a pl15 kernel for my machine. I tried both the pl15 kernel available on funet.fi and the pl15h I found here at school. When I boot and try to do an axattach, I get an error that looks something like:

SIOC(something,something): Invalid argument.

It's the same kind of error I get when it can't find the ethernet card. I haven't installed the driver for my ethernet card yet so I don't know if that will fix it.

Does anyone know what kernels the ax25 patch works on, and/or what I'm doing wrong on this compilation?

TIA,

--Michael T. Ford WZ0C  
cthomas@tree.mit.edu

-----  
Date: 3 Mar 1994 00:44:53 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!udel!news.sprintlink.net!connected.com!krel.iea.com!comtch!pfeuffer@network.ucsd.edu  
Subject: TPK Paket Software.  
To: ham-digital@ucsd.edu

-----  
Date: 3 Mar 1994 00:48:20 GMT  
From: ihnp4.ucsd.edu!swrinde!gatech!udel!news.sprintlink.net!connected.com!krel.iea.com!comtch!pfeuffer@network.ucsd.edu  
Subject: TPK Paket Software.  
To: ham-digital@ucsd.edu

Anybody have any "experience" with TPK packet software?

Joe - KW1K

-----  
Date: 3 Mar 1994 23:27:40 GMT  
From: ihnp4.ucsd.edu!swrinde!gatech!howland.reston.ans.net!torn!hermes.acs.ryerson.ca!ee.ryerson.ca!jeff@network.ucsd.edu  
To: ham-digital@ucsd.edu

References <2l2d6a\$b4n@hpbs3591.boi.hp.com>, <2l3ks3\$q9e@hermes.acs.ryerson.ca>, <2l557g\$iee@hpbs3591.boi.hp.com>ry  
Subject : Re: Email address for ARRL?

Brian Mahaffy (brianm@boi.hp.com) wrote:



: Donald Jeff Dionne (jeff@ee.ryerson.ca) wrote:  
: : Brian Mahaffy (brianm@boi.hp.com) wrote:  
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: \*\*\*\*\*  
: Default Name Server: NS.PSI.NET  
: Address: 192.33.4.10

: > arrl.org  
: Name Server: NS.PSI.NET  
: Address: 192.33.4.10

: arrl.org  
:       origin = ns.psi.net  
:       mail addr = hostmaster.ns.psi.net  
:       serial = 199311301  
:       refresh = 7200 (2 hours)  
:       retry   = 900 (15 mins)  
:       expire  = 2592000 (30 days)  
:       minimum ttl = 86400 (1 day)  
: arrl.org       nameserver = ns.psi.net  
: arrl.org       nameserver = ns2.psi.net  
: arrl.org       preference = 5, mail exchanger = mgate.arrl.org  
: arrl.org       preference = 10, mail exchanger = uu7.psi.com  
: ns.psi.net     internet address = 192.33.4.10  
: ns2.psi.net    internet address = 192.35.82.2  
: mgate.arrl.org internet address = 38.1.219.1  
: uu7.psi.com    internet address = 38.145.204.6  
: \*\*\*\*\*

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: : Jeff@EE.Ryerson.Ca

: 73s ... Brian

: --

:

: Brian Mahaffy	Hewlett-Packard	Any sufficiently advanced
: Storage Subsystems Division (SSD)		technology, is indistinguishable
: N6UGP	(208)396-7857	from Magic!
: brianm@zeus.boi.hp.com		Arthur C. Clark
: N6UGP@WB7DOW.ID.U.S.A.NA		

:

: Ask me about Linux!	The Free Unix for x86 PCs
-----------------------	---------------------------

:

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: safety, deserve neither liberty nor safety." -- Benjamin Franklin 1759

Mail is flowing now, so the MX records are correct, but the hostname  
points nowhere.....

73 Jeff

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End of Ham-Digital Digest V94 #59

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